

REMARKS

Applicant thanks the Examiner for the courtesy of extending an interview to Applicant's representative on March 10, 2003. During the interview, the then pending claims were discussed in reference to the Shohara reference. No agreement was reached.

Claims 1-54 were rejected under 35 U.S.C. §102(e) in the office action mailed October 28, 2002. Claims 1, 12, 21, 31, 40, and 46 are amended. Claims 55-69 are added. Claims 1-69 are now pending in this application. Applicant respectfully requests consideration of the above-identified patent application as amended in view of the following remarks. Applicant contends that all amendments to the claims are supported by the Specification as filed and thus do not constitute new matter.

Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 1-54 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,301,482 (Shohara). Applicant respectfully traverses this rejection.

Claim 1 is directed to a communication system. The communication system includes a number of communication circuits disposed to divide a region into communication areas. Each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area. Adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization to form substantially linear communication regions of the same polarization.

Shohara does not teach or suggest the system of claim 1. Shohara does not teach or suggest "adjacent first portions of communication areas for a plurality of different communication circuits [using] the same polarization to form substantially linear communication regions of the same polarization." At most, Shohara shows two adjacent sectors that use the same polarization. This is far short of the "substantially linear communication regions" formed by a plurality of communication circuits as shown in Figure 1 and as called for in claim 1. Therefore, claim 1 is neither anticipated nor obvious in light of Shohara.

Claims 2-11 depend from claim 1 and are thus likewise allowable.

Claim 12 is directed to a communication system. The system includes a number of communication circuits disposed to form substantially linear boundaries between communication regions. The communication circuits use a first polarization in one of the communication regions and a second, different polarization for signals communicated in communication regions adjacent to the one of the communication regions.

Shohara does not teach or suggest the system of claim 12. Shohara does not teach or suggest communication circuits that are “disposed to form substantially linear boundaries between communication regions” in which the communication circuits “use a first polarization in one of the communication regions and a second, different polarization for signals communicated in communication regions adjacent to the one of the communication regions.” Rather, in Shohara, both vertical and horizontal polarizations are used between any two rows of communication circuits. Therefore, claim 12 is neither anticipated nor obvious in light of Shohara.

Claim 21 is directed to a method for dividing a region into a number of communication areas, each communication area including a communication circuit. The method further includes communicating using a first polarization in a first portion of each communication area. Further, a second polarization is used for communicating in a second portion of each communication area. Adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization to form communication region belts having the same polarization.

Shohara does not teach or suggest the method of claim 21. Shohara does not teach or suggest using first and second polarizations for communication circuits such that “first portions of communication areas for a plurality of different communication circuits use the same polarization to form communication region belts having the same polarization.” Therefore, claim 21 is neither anticipated nor obvious in light of Shohara.

Claim 31 is directed to a method comprising forming boundaries between bands of communication regions by disposing a number of communication circuits and communicating

using a first polarization in a first band. Further, the method includes communicating using a second polarization in bands that are adjacent to the first band.

Shohara does not teach or suggest the method of claim 31. Shohara does not teach or suggest forming boundaries between bands of communication regions based on placement of communication circuits and communicating with a first polarization in a first band and a second polarization in adjacent bands. Therefore, claim 31 is neither anticipated nor obvious in light of Shohara.

Claim 40 is directed to a method comprising forming a number of communication areas, each communication area including a communication circuit. Each communication circuit communicates using a first polarization in a first portion of each communication area and a second polarization in a second portion of each communication area. The method further includes forming a number of communication regions in belts of either the first or second polarization wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization. Further, the method includes forming a number of sectors within each communication area, where the first and second portions of the communication area are divided along a number of boundaries of the sectors, each sector communicating on a different subband of a frequency spectrum.

Shohara does not teach or suggest the method of claim 40. Shohara does not teach or suggest “forming a number of communication regions in belts of either the first or second polarization wherein adjacent first portions of communication areas for a plurality of different communication circuits use the same polarization.” Therefore, claim 40 is neither anticipated nor obvious in light of Shohara.

Claim 46 is directed to a communication system comprising a number of communication circuits disposed to divide a region into communication areas. Each communication circuit communicates using a first polarization in a first portion of its communication area and communicates using a second, different polarization in a second portion of its communication area. Adjacent first portions of communication areas for a plurality of communication circuits use the same polarization to form communication region strips of the same polarization.

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Title: USING ALTERNATE POLARIZATION IN FIXED WIRELESS SYSTEM DEPLOYMENT FOR IMPROVED CAPACITY

Shohara does not teach or suggest the system of claim 46. Shohara does not teach or suggest a communication system in which communication circuits use first and second polarizations such that "adjacent first portions of communication areas for a plurality of communication circuits use the same polarization to form communication region strips of the same polarization." Therefore, claim 40 is neither anticipated nor obvious in light of Shohara.

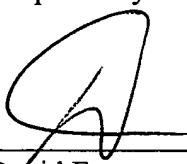
New claims 55-69 are also neither anticipated nor obvious in light of the art.

Applicant respectfully submits that claims 1-69 are in condition for allowance and notification to that effect is earnestly requested. If necessary, please charge any additional fees or credit overpayments to Deposit Account No. 502432.

If the Examiner has any questions or concerns regarding this application, please contact the undersigned at (612) 332-4720, ext. 225.

Respectfully submitted,

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